3.   (amended) A method as claimed in claim 1 [or 2], wherein the pseudo-random function applied to the data block has a property of flattening the power spectral density of the data block.

4.   (not amended) A method as claimed in claim 1, wherein application of the pseudo-random function and application of the orthogonal transform are carried out in the same operation.

5.   (not amended) A method as claimed in claim 1, wherein the at least one transform domain data coefficient selected for modification is selected according to a keyed pseudo-random operation.

6.   (not amended) A method as claimed in claim 1, wherein a plurality of data blocks of the digital media data are modified according to the identification or authentication data.

7.   (amended) A method as claimed in [any one of] claim[s] 1 [to 6], wherein the digital media data is video data.

8.   (amended) A method as claimed in [any one of] claim[s] 1 [to 6], wherein the digital media data is audio data.

9.   (amended) A method as claimed in claim [7 or 8]1, wherein the identification or authentication data is inserted into the digital media data in real time.

10.   (not amended) A method as claimed in claim 1, wherein at least one coefficient in the transform domain data which represents the average (dc) of the data block is restricted from selection for modification with the identification or authentication data.

11.   (amended) A method as claimed in claim 1 [or 10], wherein the orthogonal transform is a Walsh Hadamard transform.

12.   (amended) A method as claimed in claim 1 [or 10], wherein the orthogonal transform is selected from a discrete cosine transform, a discrete sine transform and a fast Fourier transform.

13.   (not amended) A method as claimed in claim 1, wherein the pseudo-random reversible function is a permutation of the data block based on a keyed pseudo-random number generator.

14.   (not amended) A method as claimed in claim 1, including determining an average of data values in the data block, subtracting the average value from the data values in the data

block before applying the pseudo-random function, and adding the average value back to the data values in the data block after applying the inverse pseudo-random function.

15. (amended) A method for extracting identification or authentication data from watermarked digital media data, including the steps of:

segmenting the digital media data into data blocks;

applying a pseudo-random reversible function to a block of the digital media data to obtain a modified data block;

applying an orthogonal transform to the modified data block to obtain transform domain data; and

extracting the identification or authentication data from at least one coefficient of the transform domain data.

16. (not amended) A method as claimed in claim 15, wherein the pseudo-random function applied to the data block is a keyed function controlled by a cryptographic key.

17. (amended) A method as claimed in claim 15 [or 16], wherein the pseudo-random function applied to the data block has a property of flattening the power spectral density of the data block.

18. (not amended) A method as claimed in claim 15, wherein application of the pseudo-random function and application of the orthogonal transform are carried out in the same operation.

19. (not amended) A method as claimed in claim 15, wherein the extracting step includes selecting at least one transform domain data coefficient from which to extract identification or authentication data according to a keyed pseudo-random operation.

20. (amended) A method as claimed in [any one of] claim[s] 15 [to 19], wherein the digital media data comprises video data.

21. (amended) A method as claimed in [any one of] claim[s] 15 [to 19], wherein the digital media data comprises audio data.

22. (amended) A method as claimed in claim [20 or 21]15, wherein the identification or authentication data is extracted from the digital media data in real time.

23. (not amended) A method as claimed in claim 15 wherein the orthogonal transform is a Walsh Hadamard transform.

24. (not amended) A method as claimed in claim 15, wherein the orthogonal transform is selected from a discrete cosine transform, a discrete sine transform and a fast Fourier transform.

25. (not amended) A method as claimed in claim 15, wherein the pseudo-random reversible function is a permutation of the data block based on a keyed pseudo-random number generator.

26. (not amended) A method as claimed in claim 15, including determining an average of data values in the data block, and subtracting the average value from the data values in the data block before applying the pseudo-random function.

27. (amended) An apparatus for inserting or extracting watermark data in digital media data, comprising:

   segmenting means for segmenting the digital media data into data blocks;

   processing means for applying a pseudo-random reversible function to a block of the digital media data to obtain a modified data block and performing a transform on the modified data block to obtain transform domain data; and

   means for inserting or extracting the watermark data in at least one coefficient of the transform domain data.

28. (not amended) An apparatus as claimed in claim 27, wherein the processing means is also adapted to apply an inverse transformation and inverse pseudo-random function of the transform domain data containing the watermark data so as to generate watermarked digital media data.

29. (amended) An apparatus as claimed in claim 27 [or 28], wherein the apparatus inserts or extracts watermark data in digital media data in real time.

30. (not amended) An apparatus as claimed in claim 29, wherein the digital media data comprises video data.

31. (not amended) An apparatus as claimed in claim 29, wherein the digital media data comprises audio data.

32. (not amended) An apparatus as claimed in claim 27, including means for selecting at least one transform domain data coefficient for the insertion or extraction of identification or authentication data according to a keyed pseudo-random operation.

33. (amended) A media data monitoring system comprising:
   a media data buffer for temporarily storing media data received from a data source;

a real time processor coupled to receive media data from the media data buffer and adapted to extract identification or authentication data [according to the method defined in claim 15] from the media data by:

segmenting the digital media data into data blocks;

applying a pseudo-random reversible function to a block of the digital media data to obtain a modified data block;

applying an orthogonal transform to the modified data block to obtain transform domain data; and

extracting the identification or authentication data from at least one coefficient of the transform domain data; and

a comparison processor coupled to the real time processor for comparing the extracted identification or authentication data with known identification or authentication data.

34.   (not amended) A media monitoring system as claimed in claim 33, including an analogue-to-digital converter tor converting media data into a digital form before processing by the real time processor.

35.   (amended) A media monitoring system as claimed in claim 33 [or 34], wherein the media data comprises video data.

36.   (not amended) A media monitoring system as claimed in claim 35, wherein the data source of the media data is a receiver of video transmissions.

37.   (amended) A media date monitoring method comprising:

receiving media data from a data source;

extracting identification or authentication data [according to the method defined in claim 15] from the media data by:

segmenting the digital media data into data blocks;

applying a pseudo-random reversible function to a block of the digital media data to obtain a modified data block;

applying an orthogonal transform to the modified data block to obtain transform domain data; and

extracting the identification or authentication data from at least one coefficient of the transform domain data: and

comparing the extracted identification or authentication data with known identification or authentication data.

38.   (not amended) A media monitoring method as claimed in claim 37, including converting the media data into a digital form before processing by the real time processor.